

GRY-120US

Appln. No.: 10/780,947
Amendment Dated February 14, 2006
Reply to Office Action of September 30, 2005

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Previously Presented) An electromechanical valve actuator for internal combustion engines, comprising an electromagnet and a mobile magnetic plate intended to come into contact with a part of the electromagnet, at least one said stop being located on the electromagnet or on the plate to limit a contact surface between the plate and the electromagnet, wherein the electromagnet comprises a magnet in a magnetic circuit.
2. (Previously Presented) Actuator in accordance with claim 1, wherein the stop is located essentially in the center of the contact surface between the electromagnet and the plate.
3. (Previously Presented) Actuator in accordance with claim 1 or 2, wherein the stop is located on an axis that is collinear with an axis of translation of the plate.
4. (Previously Presented) Actuator in accordance with one of the claim 1 or 2, wherein the at least one stop includes a plurality of stops and each of the plurality of stops is located on one of the electromagnet and the plate, the stops between arranged symmetrically in relation to an axis of translation of the plate.
5. (Previously Presented) Actuator in accordance with claim 1 or 2, wherein the electromagnet comprises an E-shaped magnetic circuit, and the stop is located at an end of one of three essentially parallel branches that form the E-shaped magnetic circuit.
6. (Previously Presented) Actuator in accordance with claim 5, wherein when the electromagnet and the plate are in contact with one another, the stop maintains an air gap between each end branch of the magnetic circuit of the electromagnet and the plate.
7. (Previously Presented) Actuator in accordance with claim 5, wherein the magnet is located on the surface of one of the three essentially parallel branches of the E-shaped circuit, opposite the magnetic plate.

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8. (Previously Presented) Actuator in accordance with claim 5, further comprising a second magnet, wherein the first and second magnets are located on a surface of the E-shaped circuit, and the stop is located between the first and second magnets.

9. (Previously Presented) Internal combustion engine equipped with a electromechanical valve actuator for internal combustion engines, comprising a electromagnet and a mobile magnetic plate coming into contact with the electromagnet, wherein the actuator is according to claim 1 or 2.

10. (Previously Presented) Actuator in accordance with claim 1, wherein the stop comprises a material adapted to absorb energy.

11. (Previously Presented) An electromechanical valve actuator for internal combustion engines, comprising an electromagnet and a mobile magnetic plate intended to come into contact with a part of the electromagnet, at least one stop being located on a surface of the electromagnet which is closest to the plate or on the plate, wherein a contact surface area of the plate is smaller than a total surface area of the plate to limit a contact surface between the plate and the electromagnet, wherein the electromagnet comprises a magnet in a magnetic circuit.

12. (New) An electromechanical valve actuator for internal combustion engines according to claim 11, wherein the stop is made of a magnetic material.

13. (New) An electromechanical valve actuator for internal combustion engines according to claim 11, wherein the stop is made of an elastomeric material.